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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,988

12/28/2005

Yutaka Arayashiki

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3542

1933 7590 11/01/2007
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EXAMINER

CHEN, SHELLEY

ART UNIT

PAPER NUMBER

3661

MAIL DATE

DELIVERY MODE

11/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,988

Applicant(s)

ARAYASHIKI ET AL.

Examiner

Shelley Chen

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 and 14-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of Species A filed on 15 October 2007 is acknowledged. Claims 3-5 and 14-25 are withdrawn from further consideration by the examiner under 37 CFR 1.142(b) as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 7, 9, 11, and 13 rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim limitation "outside of an oscillation enable range" is indefinite. It is unclear what exactly an "oscillation enable range" is.

The examiner will assume that "outside of an oscillation enable range" means outside of the normal operating range of the oscillation unit without the claimed element. As best understood by the examiner, the claims will be treated on the merits in this office action.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1-2, 6-8, and 10-12 rejected** under 35 U.S.C. 103(a) as being unpatentable over **the applicant's admitted prior art** (Background Art, figures 11-13) in view of **Abe et al.** (U.S. Patent # 5,334,969).

Regarding claims 1-2, 6, and 10, the applicant's admitted prior art (AAPA) discloses a radar oscillator comprising all limitations of the instant claims (Background Art section, figures 11-13), except that the switching means starts and stops the output signal of the oscillating unit, rather than the oscillating unit itself. AAPA discloses all other limitations, including the claimed amplifier means with positive feedback, the

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claimed resonator, and the claimed pulse signal (Background Art section, figures 11-13).

In the same field of endeavor, Abe discloses a radar oscillator wherein the switching means alternately changes the oscillating state of the oscillating unit between the oscillating state and the oscillation stop state (figure 2: switching means 18b of the oscillation interrupting section 18, column 5 line 67- column 6 line 5, column 6 line 63- column 7 line 2, column 7 lines 9-19)

It would have been obvious to modify AAPA to start and stop the oscillating unit itself, as taught by Abe and commonly known in the art, in order to cleanly interrupt the oscillations and conserve power, with no new or unexpected results.

(Please note that the claim language describes stopping an oscillation signal and operating the oscillation unit in an oscillation stop state, but does not explicitly describe stopping the oscillator or resonator itself. The oscillation stop state may be interpreted more broadly to mean the state in which oscillations are stopped at the output of the switch 15 of prior art figure 11.)

Regarding claims 7 and 11, it is commonly known in the art to use an element to set a resonance frequency of the oscillator outside of an oscillation enable range, and to use a switch to connect the element to the oscillating unit. (e.g. a switched RLC oscillator circuit) It would have been obvious to do so in order to enable adjustment of the resonance frequency in a simple manner, with no new or unexpected results.

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Regarding claims 8 and 12, it is commonly known in the art to use a power supply line for the amplifier means, and to use a switch to open or close the power supply line for the amplifier means. It would have been obvious to do so in order to supply the power required by the amplifier when needed while conserving power when the amplifier is not needed, with no new or unexpected results.

6. **Claims 7 and 11 rejected** under 35 U.S.C. 103(a) as being unpatentable over **the applicant's admitted prior art** (Background Art, figures 11-13) in view of **Abe et al.** (U.S. Patent # 5,334,969) as applied to the claims above, and further in view of **Igawa et al.** (Japanese Patent Publication # 60-072306)

Regarding claims 7 and 11, AAPA and Abe fail to disclose the claimed element and claimed second switch.

In the same field of endeavor, Igawa discloses an oscillating circuit including the claimed element (figure 5a: 43) and claimed second switch (figure 5a: 44)

It would have been obvious to modify AAPA to use the claimed element and switch, as taught by Igawa and commonly known in the art, in order to enable adjustment of the resonance frequency in a simple manner, with no new or unexpected results.

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7. **Claims 8 and 12 rejected** under 35 U.S.C. 103(a) as being unpatentable over **the applicant's admitted prior art** (Background Art, figures 11-13) in view of **Abe et al.** (U.S. Patent # 5,334,969) as applied to the claims above, and further in view of **Oki Electric Industry Co.** (Japanese Patent Publication # 40-011451).

Regarding claims 8 and 12, AAPA and Abe fail to disclose the claimed power supply line and claimed third switch.

In the same field of endeavor, Oki Electric Industry Co. discloses the claimed power supply line (figure 3: line to switch 4) and the claimed third switch (figure 3: 4).

It would have been obvious to modify AAPA to use the claimed power supply line and switch, as taught by Oki Electric Industry Co. and commonly known in the art, in order to supply the power required by the amplifier when needed while conserving power when the amplifier is not needed, with no new or unexpected results.

Allowable Subject Matter

8. **Claims 9 and 13 objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and rewritten to overcome the 112 rejections above. .

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Claims 9 and 13 are allowable subject matter because none of the prior art discloses the combination of recited claim elements, including the claimed first, second, and third switches all operating based on the same pulse signal indicating the transmission timing of the radar wave.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelley Chen whose telephone number is (571) 270-1330. The examiner can normally be reached Mondays through Fridays, between 10:00 AM and 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached at (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shelley Chen,



Patent Examiner

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October 28, 2007



THOMAS BLACK
SENIOR PATENT EXAMINER